ABSTRACT

A reduced keyboard system for text input on el ctronic devices, mainly for use with handheld touchscreen devices, comprising a virtual keyboard and an input device. The keyboard is preferably circular with three concentric circles. Text input is by placing the input device onto the key of the keyboard that corresponds to the first character of a word, sliding the input device to subsequent keys corresponding to subsequent characters of a word, and lifting the input device from the keyboard, producing a bi-dimensional input pattern. Keystrokes can be used instead of sliding motion in this case the input pattern is generated from the clicked keys. The system comprises a dictionary database comprising a plurality of classes containing words that have first and last letters corresponding to predetermined keys of the keyboard. The bi-dimensional input pattern produced is used to determine the identity of the inputted word at least partially based on comparison between the bi-dimensional input pattern and patterns generated from words contained within the class of the dictionary database to which the inputted word belongs. Word identification is performed using a powerful pattern recognition algorithm based on the mathematical concept of monotonicity, which is disclosed.